

# **CONSTRUCTION**

## **CLASSROOM EXERCISES**

FEDERAL ACQUISITION INSTITUTE

CURRICULUM OF PROCUREMENT  
TRAINING COURSES

CURRENT THROUGH  
FAC-90-26

**OFFICE OF ACQUISITION POLICY**  
**GENERAL SERVICES ADMINISTRATION**

## CE-6.2

# PAYMENT INVOICE

(THREE PARTS)

**Method:** Group Exercise

**Purpose:** To give students practice in reviewing and approving invoices for payment.

**Introduction:** The payment invoice exercise is broken down into three segments which will be referred to as Parts A, B, and C.

- Part A consists of a review of a Schedule of Prices which the contractor has submitted.
- Parts B and C introduce the contractor's invoices which must be reviewed and approved.

Prior to completing each one of the exercises, review the information material which is supplied to assist you in completing the exercises.

**Instruction:** Students to form into small groups and appoint a person within their group as the Contracting Officer. The findings of the group should be a consensus of the group. The individual appointed as group leader will play the role of Contracting Officer and will be the decision maker of the group on matters which would, in a real life situation, need the concurrence of a Contracting Officer, or in matters in which the group may not all agree.

## **CE-6.2**

### **INSTRUCTION**

#### **PART "A"** **SCHEDULE OF PRICES REVIEW**

Part A is a thorough review of the Schedule of Prices. Review the Schedule of Prices Check List and note any deficiencies in the Schedule of Prices submitted by the contractor.

Record your findings on the Summary Sheet. Be prepared to discuss your findings at the conclusion of the exercise.

#### **Given:**

On January 21, 1991, ACE Construction Company forwarded to you the Schedule of Prices for your approval. (The contract was awarded January 6, 1991.)

#### **General Information:**

The form or the manner in which the contractor submits the schedule is agency specific. The form used in this exercise is a generic one, but similar ones will probably contain the same basic information.

#### **Schedule of Prices Check List**

PART I (Completed by the contractor)

- (a) Verify correctness of the information in first three Blocks.
- (b) Assure that the signature in fourth Block is authorized. (President, Vice-President, Project Manager, etc.)

PART II (Blocks 1 - 11 to be completed by the Gov't.)

- (a) Verify correct data input in Blocks 1-9.
- (b) Block 10 to be completed by the reviewing official.
- (c) Block 11 to be signed by approving official.

PART II (Block 12 to be completed by the contractor.)

- (a) General organization category codes listed in the specifications section "General Paragraphs".
- (b) Check to verify that items for the prime contractor accomplishment total at least 20% of contract value. (In accordance with the "Performance by Contractor" clause.)
- (c) Check the arithmetic.
  - \* Horizontal multiplication and addition.
  - \* Vertical addition.
  - \* Total vs. contract price.

## CE-6.2

### INSTRUCTIONS

#### PART B

#### FIRST PAYMENT REVIEW

**Given:** Your construction representative gives you the "Field Pay Estimate Worksheets" which follow. These prices are based on the solutions to Part "A" of the exercise. All percentages have been agreed upon with the contractor's superintendent.

On March 3, 1991, the contractor submits an invoice.

**Required:** Complete the enclosed Invoice Form taking the following into consideration:

1. Assume that the contractor agrees to the amount as shown on the Field Pay Estimate Worksheet.
2. The first invoice paid \$1,900 for bonds only.
3. For retention, assume that the prime contractor is on schedule and no problems have arisen on the job.
4. There is a 15 day delay in contract start for Performance and Payment bond approval.

## CE-7.4

### ANSWER SHEET

1. Sketch out the "history of delays" of the project on the following:

<u>DAYS</u>												
0	40	80	120	160	200	240						

2. Determine the following:

- |                             |       |      |
|-----------------------------|-------|------|
| a. Contractor Caused Delays | _____ | Days |
| b. Government Caused Delays | _____ | Days |
| c. Excusable Delays         | _____ | Days |
| d. Concurrent Delays        | _____ | Days |

3. Draw the time analysis schedules on the following:

<u>DAYS</u>													
	0	40	80	120	160	200	240						
AS PLANNED													
AS COULD HAVE BEEN													
PROPERLY EXTENDED													
AS BUILT													
ADJUSTED													

4. Determine the following:

- |                            |       |      |
|----------------------------|-------|------|
| a. Days Time Extension     | _____ | Days |
| b. Days Extended Overhead  | _____ | Days |
| c. Days Liquidated Damages | _____ | Days |

## CE-8.7

### THE RETAINING WALL ADDITION

**Time:** 3 1/2 hours

**Method:** Group Participation

**Instruction:** Students will be given the assignment for this classroom exercise on the 2nd Monday of classroom study in order for you to do some individual study prior to the actual time for the group classroom exercise which is scheduled for the afternoon of Thursday of the second week of instruction. In order to prepare for the exercise read through the documents and study Section 2 of Appendix A and Appendix B located in the Text/Reference Book.

The exercise is based on the premise that you have had a course in Cost and Price Analysis, and that you have a working knowledge of the use of the Weighted Guidelines method of determining profit. It is also based on the premise that you are able to complete the CPM portion of the exercise and determine overhead rates by studying the information contained in the Text/Reference Appendix A and B. The instructor is prepared to offer either individual or group instruction on the exercise during the allotted study period preceding the day of the exercise, or after class.

On Thursday afternoon at the scheduled time for the exercise, students will be broken up into respective groups. You will be allowed the balance of the afternoon to complete the exercise, except for a period reserved at the end of the day for the instructor to go over the results. Instructor will wander among the groups offering assistance as needed.

Students are to work on the following assignments both individually and working in groups, assisting one another.

1. Using the instruction contained in the exercise (See, also, Section 2 of Appendix A of the Text/Reference) determine the critical path on the Retaining Wall Modification Schedule.
2. Using the instructions contained in the Text/Reference, Chapters 7 and 8, calculate the direct costs for modification.

(Remind the students that direct costs are the costs of the materials, supplies, and subcontracted work and labor that go into and can be clearly identified with, a particular segment, phase, or unit of a project. They usually constitute the largest portion of TOTAL COSTS, and they also form the basis for allocating overhead expenses, thus influencing the amount of these indirect costs as well.)

## **CE-8.7**

3. Using the Text/Reference and instructions in the exercise, calculate all overhead costs for the modification using:
  - \* The Normal method, and
  - \* The Daily Rate method
4. Using the information contained in the Text/Reference and that contained in conjunction with the exercise, entitled "Profit Analysis Information", calculate the profit for the modification using the "Weighted Guidelines" form furnished.
5. Using the Weighted Guidelines form, arrive at an estimated final cost for the modification.
6. Compare the Government's position with the contractor's proposal and the Audit information which is provided in the exercise.

Determine your prenegotiation position for the Price Negotiation Memorandum by completing the Cost Analysis Form provided.  
(Optional: Assuming a requirement for certified cost and pricing data, use the check list provided to determine if the contractor conformed to "Truth in Negotiations".)

7. Complete Forms SF30 and GSA 2437.

## **AUDIT REPORT (cont.)**

1. The audit report reflected some differences between the audited rate and the proposed rates on all three categories.
2. Neither the proposal or the audit identified costs as "judgemental" or "actual".
3. There were no discrepancies concerning units (i.e. cy, cf, etc.) and there were no identifiable "lump sum" costs.
4. The audit revealed that adequate subcontractor documentation was sufficient.
5. Overhead was found to be broken down between field and home office.
6. Labor costs, labor hour discrepancies were noted.
7. Material cost discrepancies were also noted.